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EDUCATIONAL NEWS AND EDITORIAL COMMENT

The Chicago Banquet

On Wednesday evening, February 25, alumni and students of the University of Chicago in attendance at the meeting of the Department of Superintendence in Richmond, Virginia, will meet for the annual Chicago banquet. The place and exact time of the meeting will be announced by placards posted at headquarters.

The Chicago School Controversy

The school system of Chicago is suffering from an acute attack of politics. For some time the Board of Education and the Superintendent have been at odds. During the summer the disagreements of the two parties came to the surface through the resignation of the Superintendent and an acrimonious discussion about the adoption of certain textbooks. The Superintendent took the position in which the educational profession would unqualifiedly support her, that the choice of textbooks is a professional matter and that she could not advantageously continue in office if deprived of the power of selecting textbooks. So strong was the expression of public sentiment at that time that the Board of Education went through the form of assuring the Superintendent of its warmest support; and the resignation having been gracefully refused, the Superintendent resumed her office.

The pretense of harmony was not long maintained. In December the Superintendent once more expressed her willingness to

withdraw if she could not command the support of the board and the board elected a successor.

At this point the Mayor of the city took a vigorous part in the proceedings. It seems that he had demanded and received at the hands of a number of his appointees, before they entered upon their exalted duties as members of the board, their resignations. These resignations, or pledges of good behavior, had been carefully preserved in the Mayor's office against the date when the members of the board should prove unfit in the eyes of the Mayor for the further discharge of the duties which belong to the lay directors of the school system. To the Mayor the acceptance of the withdrawal of the Superintendent seemed bad business. So he brought out the resignations of board members from their storage and accepted them, thus affecting a sudden reorganization of the board. Unfortunately the Mayor had only a few documents of this type and he could not mold the board into a perfect instrument of his will. He secured a board which was able, however, to re-elect the Superintendent; the sometime successor resigned and once more became first assistant superintendent. The ousted members of the board entered upon a clamorous discussion of the intricate problem of the validity of their resignations, even entering legal suits to prove their contentions. In the meantime the board resumed its work divided, as it would appear, into two factions, one of thirteen and the other of seven.

Other developments came on apace with the new year. It seems that a high price has been paid for certain school sites and this matter is to be investigated. The problem of teaching sex hygiene has been much discussed and has been variously voted upon. Just at present it is not to be taught, according to the latest action of the board, and the Superintendent expresses the complaisant view that perhaps people are not ready for such courses. The air is thick with rumors of good and evil, and the common man wonders what will happen next.

The situation has at times been discussed in the public press as though it involved primarily personal elements. The memory of man reaches back, however, to earlier controversies in this

school system not dissimilar to this, and one is disposed to believe that the personal factors in the present situation do not explain the fundamental difficulty.

Some have tried to use the occurrences of the last few months in the interests of the woman's movement. This effort has complicated the situation somewhat; it has hardly contributed to its explanation or solution. There are those who say that the anxiety of the political leaders to keep up the pretense of peace is connected with their fear lest the candidacy for higher municipal office of some of the women involved may issue from this unfortunate controversy between the board and a woman superintendent.

Stripped of its incidental complications the spectacle is that of a school system distracted by uneducational politics, used by interested parties for ends other than those which are legitimate. A board of education at the beck of the mayor is no board. Any superintendent who has to go into politics or enter upon a political career from choice is just in that degree distracted from the functions of his office. Chicago is a little worse than most other places merely because it is larger and more complicated.

It is idle, however, merely to indulge in condemnation. What is the cure? The cure is to be found in the development of a professional control of schools. This means that school people must know what is efficient in education and they must be able to make clear to the communities which they serve that they know what is efficient. There is a body of fact about the Chicago schools which would make it perfectly clear that in these and these respects the administration is efficient and in these and these respects in need of improvement. The collection of such objective information about schools is a professional, scientific problem. When school people make it their business to get such material together the politicians will be less eager and less able to interfere with them. It is the opinion of the present writer that the school administration of Chicago can be taken out of politics through the development of scientific professional methods and only in that way. The politicians will sooner or later overcome every agency which does not

meet them with a definite professional body of fact and with a clear objective body of evidence. The life of any administration depends on its ability to replace personal and political control by objective, scientifically justified methods and principles.

C. H. J.

The Ohio State School Survey

On December 5 and 6 there was held at Columbus, Ohio, a congress of education, consisting of some two thousand five hundred delegates representing the local communities of the entire state. The meeting was called by the governor of the state for the purpose of considering, in town-meeting fashion, the report of the Ohio State Survey Commission as to the condition of the schools of Ohio, and the remedial legislation that was being proposed by this commission.

The report shows the need of: (1) a more extended training of teachers; (2) more adequate supervision of the school plant and the classroom teaching; (3) more systematic expenditure of money for school purposes; (4) simpler and more effective methods of certificating teachers; (5) more adequate buildings, equipment, and financial support; (6) consolidation of rural schools, especially where they are small. In connection with each of these shortcomings, the commission points out the necessary remedial legisative program, as they conceive it.

The report was adopted with practically no opposition; and the speaker of the House, referring to the legislation recommended, said: "In the special session, if you give us nothing better, we shall pass this." The extensiveness and thoroughness of the survey, together with its popular nature, gives the leaders of educational reform in Ohio a tremendous leverage upon the legislature.

Many other states have had small expert educational commissions make intensive study of conditions for purposes of legislation. Their work is often done without much contact with the workers in the field, and may or may not receive popular support. Ohio has shown a method of arousing the entire profession of the state by means of such a survey, and making its recommendations far more certain of passage.

A State Survey Proposed in Illinois

Other states are proposing similar surveys. At the recent meeting of the State Teachers' Association of Illinois, for example, a resolution was passed proposing for Illinois a state-wide survey to be carried forward by the superintendents and teachers of the state in co-operation with the state department of education, the state university, the state normal schools, and such other colleges and universities of the state as would be willing to assist in such an undertaking. This plan of organization and leadership has a number of points in its favor not possessed by the method pursued in Ohio. Tremendous good could be accomplished for the schools of the state if it could be carried through in a thorough manner. Where the fifteen thousand teachers of the state are all voters, as in Illinois, if once aroused and organized for action, they might easily carry through any rational legislative program.

J. F. B.

The Portland School Survey

One who desires to know the most progressive principles of school management as applied to all phases of a modern complex city school system could not do better than to read the recently published report of the school survey of Portland, Oregon. The survey was intrusted to as expert investigators as are to be found and they were given free hand. Professor Ellwood P. Cubberley, of Stanford, was in general charge and was assisted by Professors Fletcher B. Dresslar, of Peabody College for Teachers, Edward C. Elliott, of the University of Wisconsin, and Lewis M. Terman, of Stanford, and Superintendents J. H. Francis, of Los Angeles, and Frank E. Spaulding, of Newton, Massachusetts. Each of these men is recognized as an expert in some phase of school management. The feature of their report which makes it of interest, not merely to the citizens and school men and women of Portland, but also to educators and citizens of other communities, is the fact that the authors do not "offer merely a critical report, or summarize the merits and defects and cast up a balance, and stop with such." On the contrary, they go much farther in the direction of positive recommendation than they would be justified in going if their purpose were primarily

criticism, and outline a constructive program for the organization of the whole system in accordance with the best ideal which has been formulated on the basis of present-day experiment and thought. This ideal is one which is not realized in all its elements in any single school system and therefore no school system can be criticized for not measuring up to it in all respects. Each part of it has been made actual in some system, however, and in some of the more progressive systems much of it has been reduced to practice. The aspect of the Portland situation which makes it serious is that in nearly every regard it is inferior to the best practice in other places.

It is not in place here to detail the criticisms which are made in the report. The responsibility for the condition which was found is believed to rest not so much upon the average personnel of the system as upon the general administrative situation which was developed when the city was small and which has not changed to keep pace with the city's extraordinary growth. The responsibility for the administration of the schools, even in the details of its educational side, was found to be largely in the hands of the board, and the superintendent and his subordinates did not, therefore, have either the opportunity or the stimulus to initiate progressive measures. The modern plan of administration by which the conduct of an institution is concentrated in the hands of an expert or experts who are given large freedom and are held accountable for results is the obvious remedy. The result of the plan in which the non-expert board of education interferes in the conduct of the educational aspect of the schools is at the best—as the present survey proves—that the conduct of the schools degenerates into a lifeless routine. The school board of Portland was conceded to be public spirited and conscientious. When it is composed in whole or in part of appointees who owe their position to their political influence we have the intolerable situation which is referred to in another column in the comments on the Chicago situation.

The scope of the Portland report may be seen from the subdivisions of which it is composed. The first part consists in an illuminating description and discussion by Professor Cubberley of the organization and administration of the schools, and includes

chapters on the selection and tenure of teachers, and the salary of teachers. The same author also contributes an outline of the needs of the educational system of the city based upon an analysis of its social and economic position. Superintendent Spaulding follows this outline by a detailed survey of the curriculum and methods which are at present employed and of the improvements which should be made. Professors Cubberley and Dresslar contribute chapters on school buildings in answer to the questions: "(1) How can they [the Board of School Directors] secure the construction of the best, safest, and most economical school buildings; and (2) How can they make those already constructed meet most helpfully the educational and hygienic demands of school life?" Professor Terman gives a constructive program for health supervision, Professor Elliott a survey of attendance statistics and of records, and Professor Cubberley a discussion of the costs of the system.

Such a survey as this, made by disinterested experts outside the school system, ought to be initiated by the school board or superintendent of every large school system. The advance of every school system is retarded in some measure by practices which are inherited from a past in which the conditions were different from those which prevail at the present time. Those who have grown up within the system cannot realize the discrepancy between the present demands and the opportunities offered by the school. Furthermore, the personal relations which exist between the various members of a school organization make a thorough survey by members of the system itself difficult. The demand for a survey by outsiders is therefore no disparagement of the ability of the members of the school organization.

When a situation arises such as that which confronts the citizens of Chicago, where strong evidence of a corrupt relationship between the board of education and the prevailing political faction is presented, it becomes all the more evident that strong light should be thrown upon all the recesses of the organization. In such a case plans should be laid not merely to detect and punish the present offenders but also, if possible, so to reorganize the whole system that corruption will be very difficult. Either for making

the financial administration of the schools free from taint and public spirited, then, or for keeping the educational administration up to the level of the best practice and theory of the time, an impartial, expert survey is an essential instrument.

F. N. F.

Bureau of Research of Upper Peninsula Educational Association

There appeared recently a report of the Bureau of Research of the Upper Peninsula Educational Association (Michigan). This bureau, of which James H. Kaye, Marquette, Michigan, is chairman, is maintained by the associated teachers of this part of the state to conduct research regarding the educational conditions that maintain in the schools. The report is divided into three parts, one on the rural schools, another on the city grade schools, and the third on the high schools.

The number of teachers sending in reports is almost the same for the rural schools as for the city schools, so that comparisons are easily made. In all, 1,412 grade teachers, 24 superintendents, and 7 commissioners reported, representing twelve of the fifteen counties; 702 rural teachers reported, 710 city teachers. Of the rural teachers, 137 are without any training for their work and 172 are normal or college graduates. The cities and towns all demand normal or college graduation as prerequisite for grade teachers' certification.

The average number of pupils per teacher in the city and village schools is 37; the average in the rural schools is considerably less, although there are 37 rural schools with more than 50 pupils. The pupils are a surprising mixture of nationalities: the single town of Ironwood reporting 22 nationalities.

The region is devoted to mining, lumbering, and agriculture; the schools consequently make prominent manual-training and agricultural instruction—16 out of the 24 towns reporting give manual training, seven give agriculture. Six of the towns have trade schools, taught by instructors who have practiced the trades. Trades taught include carpentering, plumbing, blacksmithing, bricklaying, machine-shop, metal work, and pattern-making; two schools have trade courses for girls in dressmaking. The city

schools are giving more manual training, trade work, and agriculture than are the country schools.

The city teachers report that 77 out of the total of 710 are performing experiments in physiology along with their instruction. Ninety-nine of these same teachers report taking geography classes on field trips. In the country 152 teachers are performing experiments in physiology; 151 are taking their classes on field trips in geography. These are interesting evidences of progress, especially when the writer recalls that in these same regions field trips in geography and experiments in physiology were an unknown factor during his boyhood experiences in these schools. The report on the whole is an interesting one, and in view of the fact that the region is something of a natural geographical unit, it is worth while.

Bulletins on Health of School Children

Three exceedingly valuable bulletins on the health of school children were issued during 1913 by the United States Bureau of education. One (No. 16) is a *Bibliography of Medical Inspection and Health Supervision, 1909–12 inclusive*, of 136 pages. It is an annotated and classified list of available books, pamphlets, and magazine articles covering practically everything of prime importance recently published on the subject.

Another (No. 44) is entitled *Organized Health Work in Schools*. It is by Ernest B. Hoag, M.D., director of school hygiene for the Minnesota State Board of Health. It outlines the three types of organization for the administration of health supervision, (1) with school medical officer, nurse or nurses; (2) with school nurse only; (3) with simple and non-technical health survey on the part of the teachers only. Under each heading there is described clearly just how the work is conducted in one or more cities in which the particular plan has been successfully tried, except that under (3) detailed suggestions and directions are given for a survey with the printed forms and questionaires that are to be used.

Briefly, the subject of health supervision in rural schools is discussed, as is also the study of exceptional children.

Part II of the pamphlet describes the state organization of

school hygiene in Minnesota, which until last year was the only state to undertake such work.

The third bulletin is No. 48 and is a report of the Fourth International Congress of School Hygiene, held at Buffalo, New York, August 25–30, 1913. Part I is a brief introduction; Part II gives abstracts of many important papers; Part III describes the scientific exhibit.

These bulletins mark the wide-spread and increasing interest in medical supervision of school work in the interest of greater efficiency. In 1900 only 8 cities in America had any organized health work in schools. The school nurse was an unknown, the world over. It was only in 1909 that the first open-air school for tubercular children was opened in Providence. Now some eight hundred cities have departments for health supervision and school nurses are employed by the hundreds while open-air schools are provided by the score in many cities for many pupils besides the tubercular.

Last year [1911–12] Boston's eighty-seven school physicians under the direction of Dr. W. J. Gallivan, examined 118,781 school children. Of these 40,850, one-third, were without defects and 77,931 had defects that needed medical attention. In 1912–13, 121, 832 were examined, 69,332 were defective.

The special feature of the work of the year was an attempt to find out how many defects were corrected through the initiative of parents, after they had been notified by the school physicians.

Result: At the end of the year another examination was made and it was found that 70 per cent of the defective palates had been attended to, 74 per cent of the skin diseases, 25 per cent of the defective teeth, 43 per cent of the bad tonsils, 66 per cent of the malnutrition, 65 per cent of the nervous diseases.

In New York, 1909 to June, 1912, 727,750 children in the public schools received a complete physical examination. In round numbers, 60 per cent were found defective.

In the schools alone the efforts of the division of child hygiene have resulted in an immense gain in school time for those children who were affected with contagious skin and eye diseases, the necessary exclusions for these reasons being reduced from over 57,000 in 1903 to slightly over 3,000 in 1911. . . . . Without an effective follow-up service conducted by the visiting nurses, medical inspection is ineffective. Until 1908 New York City relied upon postal cards sent to parents of defective children, and was able to secure

action in only 6 per cent of the cases where treatment was recommended. Immediately on placing the follow-up service in the hands of school nurses the percentage increased to 84.

Similarly in Philadelphia 21.1 per cent of the cases reported were found to have had action when not followed up by a nurse, 80 per cent when so followed up.

Fall River, Massachusetts, in its school report for 1911 states that the percentage found defective in 1907 was 4.1; in 1908, 3.3; in 1909, 2.9; in 1910, 2.9; in 1911, 2.2. Everywhere there is the fight through the schools against such diseases as tuberculosis, the hook-worm disease, and the communicable diseases of childhood. Systematic recreation is receiving attention, play under guidance as a means of achieving health. Dental clinics are adjuncts of the school. Trained oculists are employed by the school boards, and experts on nose, ear, and throat diseases.

In Saginaw, [Michigan] the work begins [1913] with seventeen east-side dentists volunteering to co-operate and give of their services freely. Besides this, the dentists are providing the equipment to give the free clinics a suitable start, and this means a great deal. Free dental treatment will be given the school children attending the clinics, and they will be taught the proper methods of caring for their teeth, as well as general hygiene pertaining to the dental science. It is proposed to throw the clinics open to all school children, including those of the parochial schools.

Defective and retarded children are segregated, studied, and treated. More than that causes are traced and if possible eradicated.

At the Congress on School Hygiene, held recently in Buffalo, Dr. Walter M. Roach, district supervisor of school medical inspectors in Philadelphia, reported the results obtained among school children of ages from six to fourteen years after the establishment of a food clinic in certain schools in his district. Many of the children were found to be coming to school with insufficient or no breakfasts.

The children were fed for a period of four weeks in the spring of 1913, at the morning recess period, with some form of cereal and milk, the form of cereal being changed daily. In all, 113 children were fed in this manner.

In a group of fifty, who were carefully weighed, measured, and physically examined before the beginning of the feeding and afterward, it was found that there was an aggregate gain of over 252 pounds.

The average grades for the whole school, 350 pupils, including the 113 who

were given the feedings, increased in spelling from 76.4 to 82.3, and in arithmetic from 69 to 72. For the same period the averages of the pupils of the second grade attending the clinics increased from 71 to 87 in spelling, and from 59.6 to 71.3 in arithmetic.

E. R. D.

Faults of the District Unit

The faults of the district school unit are presented on the basis of very illuminating statistical evidence in an article in the *Missouri School Journal* by Dean Charters of the University of Missouri. The situation is put vividly in the following concrete illustration:

> The first weakness of the system is the inequality of opportunity for boys and girls.
>
> Let me illustrate this inequality in country districts lying side by side. Presumably if John lives on one side of the road in this imperial state of Missouri and his cousin James lives on the other side of the road, they should have the same chance to get an education. But if you will consult Table I, you will see that sometimes, if they happen to be in different school districts, they have far from equal opportunities. If John lives in the $110,000 district and James in the $36,000 one, John gets a chance to go to school eight or nine months in the year, while James must be satisfied with six months. John, while at school eight months, will be likely to have a first- or second-grade teacher at a salary of over $400; while James will probably be given a second- or third-grade teacher at a salary of less than $400.

That this is not an isolated case is shown by the comparison of two groups of districts in each of eighty-four counties. In each case the two districts which are compared in each county are adjoining. The average assessed valuation of the wealthy districts is $110,594 and of the poor adjoining district is $36,674. The median tax levy of the wealthy districts is 40 and of the poor districts over 60. Seventeen per cent of the teachers in the wealthy districts have the third or lowest degree of certificate, while 52 per cent of the teachers of the poor district have these lowest-grade certificates. Seventy-eight per cent of the teachers in the wealthy districts receive over $400 in salary and 76 per cent of the teachers in the poor districts receive less than $400. It is evident, then, that the various points which Dean Charters makes are well taken. Not only is there an inequality in opportunity in the adjoining districts, but the rate of taxation and the returns are "unequal and

inequitable." Furthermore, there is a very unequal return for the amount which is spent in the better and the poorer districts. This may be expressed in the per capita cost. In Columbia County, for example, where the length of term is nine months and where twelve grades are maintained, the per capita cost is $37, whereas in District 42, where the length of term is only seven months and only eight grades are maintained, the per capita cost is $66. This indicates that in some districts the administration is very much more economical than in others. In general, then, it may be said that the poor districts suffer through a larger tax levy and through a smaller return for the money which is spent.

A further difficulty with this system is the great multiplication of school directors which it entails. There are in the various districts of Missouri 30,000 school directors. It is obviously impossible for a state superintendent to exercise any adequate supervision over such a large number of individuals and it is further obvious that some form of concentration is necessary to make possible an efficient administration. Professor Charters shows that the county school unit exists in twelve states and points out that it is therefore a practical plan. The theoretical basis for the union of the smaller districts into larger administrative units is, as Dean Charters points out, the fact that the school exists for the purpose of furnishing adequately equipped citizens for the state and that the responsibility for the support of the school inheres in the state and not in the local units. The equalization of opportunity and the distribution of the burden according to ability to meet it are therefore fundamental principles of education and ones which are obviously grossly violated in the conditions which are shown to exist under the district system.

Education of the Immigrant

A recent bulletin of the United States Bureau of Education entitled *The Education of the Immigrant* presents in a convincing fashion the educational responsibility and the opportunity which result from the large tide of immigration which has come to this country in recent years. The unusual character of this responsibility is indicated in the following paragraph from the bulletin:

The instruction of the immigrant child is a problem with which few nations have had to deal in any but a meager way. Colonies are usually settled by homogeneous bodies of people agreeing in language, customs, political ideas, and religious beliefs. Settled countries generally receive accretions of small bodies which are readily absorbed. For a time, however, these bodies naturally seek association with those who have come before them and who have, to a great extent, adopted the language and customs, as well as the political ideas, of the country in which they have sought a home. As long as the immigration is comparatively small in quantity, the problem is not serious. But when what may be called "the saturation point" has been reached, the most serious consideration must be given to the problem. Such a point has been reached in some parts of the United States, especially in New York City.

There are certain characteristics of the immigrant child which make his education a peculiar problem. The fundamental problem in connection with the foreign-born children, of course, is that of language. In New York City this problem has been met by the formation of special classes in which instruction in the English language is a very prominent part of the work. A further condition which limits the usefulness of the school to the immigrant children is the fact that the tendency to leave school at the age of fourteen, which is a general characteristic of the school population, is still more marked in their case. These children, then, besides being more difficult to teach because of their language disability are in the school for a shorter period of time. Another of the problems which confronts the teacher of the immigrant and his children is the readjustment to the social ideals of the new country which the immigrant is required to make. The conflict between the new and the old points of view is brought out very clearly in the second generation. It is pointed out that the second generation underestimates the value of the culture which existed in the old countries and therefore grows out of sympathy with its parents and beyond their control. This presents a situation in the home which has grave social consequences, as is shown by statistics of crime.

The number of male prisoners per 1,000,000 of the population of voting age in 1890 was as follows: Native white of native parents, 3,395; native white of foreign parents, 5,886; foreign whites, 3,270. In this analysis, age for age, the foreign-born show a lower rate than the native-born. Besides, the table shows criminality among the native-born of foreign parents twice as high as either of the other groups.

The school is attempting to meet this situation both by leading the child to appreciate the value of the older culture and also by bringing to the parents some of the opportunities which are open to the child and which will prevent too great a gulf between the points of view and the attainments of the child and the parent. This education of the parents is carried on in evening schools and in a most interesting type of work which has been recently inaugurated in New York state. A recent law has been enacted which authorizes the creation of temporary schools in labor camps where the construction of public work is going on. A great many of the immigrants go directly to these labor camps, and it is therefore necessary to take the school to them if they are to be reached by its influence. The form of training consists pretty largely, of course, of language work and includes also something of arithmetic and geography. Besides the formal studies the life of the laborers is relieved from monotony by forms of recreation such as the radiopticon and the phonograph. It is reported that this work is of great value in preventing the formation of the drinking-habit, and its importance to the immigrant and to the nation can scarcely be overestimated.

F. N. F.

A STUDY OF RETARDATION AND CLASS STANDING ON THE BASIS OF HOME LANGUAGE USED BY PUPILS

EVERETT EVELETH CAMPBELL
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Does the use of some foreign vernacular as the home language of pupils have any causal connection with their acceleration or retardation in our public schools, or with their relative standing in the classroom?

The extent of the problem which is presented in this question is measured, on the one hand, by the exceedingly large foreign-speaking population which we have come to have in America, especially in our cities, and, on the other hand, by the heavy percentage of retardation that prevails in our schools. To cause this retardation many factors are operating. Whether or not the use of a foreign language in the home is one of these is the subject considered in this investigation.

The percentage of the foreign element is indicated by the tables given in the United States Census Reports of 1910, showing that of the 91,972,256 inhabitants in the continental United States, 14.7 per cent are foreign born, while 20.6 per cent more have foreign-born parents. In distribution throughout the states the percentages vary from 2.4 per cent of foreign born in the South Atlantic Division, and 2.6 per cent in the South Central Division, to 15.6 per cent in the North Central Division, 19 per cent in the Western Division, and 25.6 per cent in the North Atlantic Division. Those with foreign-born parents vary from 3.6 per cent in the South Atlantic Division, and 4.8 per cent in the South Central Division, to 24.5 per cent in the Western Division, 27.8 per cent in the North Central Division, and 29.5 per cent in the North Atlantic Division.

Within these various divisions a few of the typical states vary as follows:

TABLE I

	Percentage Foreign Born	Percentage Foreign Parents
Massachusetts	31.2	34.8
New York	33.0	29.9
Illinois	21.3	30.6
Wisconsin	22.0	44.0
California	21.8	26.7
North Carolina	0.3	0.7
Indiana	5.9	13.0

These figures indicate a wide variation, yet in a majority of the states the percentages are high. In many of them from one-half to two-thirds of the people are either foreign born themselves or have foreign-born parents. In our large cities, where the population is densest, this condition is most pronounced.

When we turn our attention to retardation in the schools we find figures that are equally striking. In *Bulletin No. 5*, 1911, of the United States Bureau of Education, prepared by Dr. Strayer, of Teachers College, New York, tables are presented showing the results of an investigation in 318 cities. Counting children six or seven years old in Grade I as of normal age, seven or eight in Grade II, eight or nine in Grade III, and so on, the tables give the following percentages:

TABLE II

	Normal Age	Over Age					Under Age
		1 Yr.	2 Yrs.	3 Yrs.	4 Yrs. and Over	Total	
Chicago boys	61.7	19.9	9.7	3.8	2.2	35.6	2.7
" girls	66.8	18.1	7.6	2.7	1.4	29.8	3.4
Indianapolis boys	63.5	20.0	9.5	2.3	2.1	33.9	2.6
" girls	65.9	18.2	8.7	2.9	1.0	30.8	3.3
Philadelphia boys	53.6	21.9	12.5	6.2	3.6	44.2	2.2
" girls	57.2	21.1	11.7	5.0	2.5	40.3	2.5

The variation in the percentage of those entered as of normal age extends from Savannah, Ga., (colored) boys 25.6 per cent, girls 25.8 per cent; Houston, Tex., boys 25.8 per cent, girls 30.5 per cent; and Erie, Pa., boys 38.9 per cent, girls 46.3 per cent,

up to Aurora, Ill., boys 73.7 per cent, girls 76.1 per cent. The variation in the enrolment of under-age pupils extends from boys 0.3 per cent, girls 0.2 per cent, in Birmingham, Ala. (Columbia, S.C., is reported blank), to boys 35.7 per cent, girls 39.4 per cent, in Haverhill, Mass.

For cities with a population of less than 25,000 the figures are similar.

Here again, just as in the tables presented above giving the foreign element percentages, there is a wide range of variation, yet a condition that is widespread, pronounced, and serious.

Other investigations, more limited in extent, and varying somewhat in method, but made with equal care, have netted approximately the same results.

This present study to discover whether the first of these conditions, viz., the presence of a large foreign-born and foreign-speaking element in our population, has an active influence in producing the second condition, is not the first that has been made. Many educators have suggested that such a relationship exists, and have been desirous of ascertaining the actual facts. Dr. Leonard P. Ayres conducted in New York City an investigation of 20,000 children in fifteen schools. The results were negative. These he sums up in his *Laggards in Our Schools*, and also refers to the experience of the department of education in Porto Rico in changing its schools from the Spanish to the English basis with little or no loss of time on the part of pupils, and again to the investigation conducted by Superintendent James E. Bryan, of Camden, N.J. This last also gave negative results.

So far as known to the writer, however, no extended investigation has been made in Chicago or anywhere in the North Central Division, though the percentages given above indicate that the two factors are as acute here as elsewhere. Nor can it be questioned that the problem is of sufficient importance to warrant the gathering and considering of more extensive data than we have yet had before conclusions can be reached that may be called final.

Further, it appears that the preceding investigations, notably that of Dr. Ayres, have been based on differences in *nationality*. This is not identical with difference in language. Many Germans

use English exclusively in their homes while still entered in school registers as German in their nationality. The same is true of immigrants from all other countries. The present study undertakes to differentiate on the basis of the language used by pupils as their home language.

METHOD OF INVESTIGATION

The method followed has been:

1. On printed cards, as shown here, the individual records of over 3,000 pupils have been entered. These have been secured by copying them carefully from the school registers and enrolment cards in seven different schools widely scattered in the city of Chicago.

School.....Room.....
Pupil's name.....
Language.....
Date of birth.....
Home conditions.....
Age entering this school.....
Grade.....
Date of entering grade.....Age.....
Half-years below grade.....Age.....
Half-years above grade.....Age.....
Mentality.....Interest.....Industry.....Scholarship.....
Remarks.....
.....

2. By arrangement with the principals the pupils were given blank slips on which they were asked to write their names and the home language used. With the envelope in which the blank slips were handed to the teachers, or more frequently sent to them by the principal from his office, the following directions were given:

Please have each pupil enter on one of the inclosed slips:

(1) Name.

(2) Language ordinarily used at home *with parents*.

Please emphasize that it is the language used with parents, or those with whom the pupils live, that is to be given, since many use English with brothers and sisters and playmates, who use some foreign language with their parents.

Kindly check over the slips to see that the answers given agree with your own knowledge of the facts.

3. The language entry was then transferred from the pupils' slips to the corresponding printed cards on which the register records had been entered.

This use of two separate sets of cards with the transfer of entries involved much extra work, but it was felt that it was necessary in order to avoid the distribution of the full printed cards in the schools, with the consequent danger of pupils objecting to such a laboratory study. Principals and teachers might well object to this. No such objection holds against the method used.

4. For the children of the lower grades, who could not be expected to fill out their own slips, the method followed was to enter the nationality of each pupil on the cards, together with the other entries from the school enrolment cards, and then have the principal send these to the teachers with the accompanying request:

> Will you kindly check "Language," as entered on inclosed slips, and make corrections as necessary? The entry made is the nationality of father and mother as shown by the record cards, and may or may not indicate the language spoken. Some pupils speak English with brothers and sisters but a foreign language with parents or guardians. It is this latter that is wanted if it can be given.

5. Extensions were made on the cards which were then arranged by grades, and these subdivided into language groups, and the number in each entered in the tables of frequencies which present the data used in this study, and on the basis of which its conclusions are reached. It was found that the enrolment card entries for "above grade" and "below grade" could not be used on account of inaccuracies and variations in method of computation, so only age was entered as an extension on the cards. Acceleration and retardation were computed in the frequency tables. The blanks on the cards for "mentality," "industry," and "interest" were inserted to correspond with the enrolment card entries in Schools A and B. No use of them has been made in these tables. In the registers of the other five schools there were no corresponding entries.

6. In computing ages the nearest half-year has been taken.

7. In computing acceleration and retardation the usual method is to count all six- and seven-year-old children as normally graded when in Grade I, seven- and eight-year-old children as normally graded when in Grade II, and so on. But for the purposes of comparison between various groups within each grade, this two-year range of variation is too wide. Accordingly an arbitrary standard has been established, and children of all groups have been measured by this. Those of age six have been considered normal only in

Grade I, of age seven, only in Grade II, of age eight, only in Grade III, and so on up to Grade VIII, in which only those of age thirteen have been counted as normal.

As in computing ages the nearest half-year has been taken, it follows that acceleration and retardation have been figured on the same basis.

Certain difficulties encountered in securing accurate data need to be noted:

1. Register and enrolment card records are often incomplete. The date of original entry into the school can usually be found on the enrolment cards where this system is used, but not in the register, where the register system is used, except by a hopelessly interminable tracing-back to the year when the pupil first entered, and then back a year or two farther to find a time when he was not present.

For some schools, moreover, up until within the last four or five years, the grades of pupils were not entered in the register, but only the number of their room. The grade now in this room may or may not indicate the grade that was in the room five years ago. These conditions prevent an investigator from tracing individual pupils and basing his conclusions on their progress through the grades.

2. The forms in which records are kept are dissimilar. In five of the seven schools studied there are registers. In two there are enrolment cards, filed in card catalogue system. The register entries give the number of the pupil's room, his father or guardian's name, his birthplace, age, age entering grade, grade, weeks in grade, and promotion, with one or two other columns giving information not germane to this study. The column headed "Promotion" is ordinarily not filled in.

The enrolment card entries include all that is given above, together with nationality of father and mother, home conditions, school from which received, or certification when dismissed, original date of entering the school, half-years below grade, half-years above grade, and columns for entering letters to indicate mentality, interest, industry, scholarship, etc. Much of the material, then, that might be secured from the enrolment cards cannot be secured from the registers.

The dissimilar nature of the records is found again in the variation in methods of making entries that obtain in different schools, or among different persons in the same school.

3. The nomadic character of the population is an added difficulty that renders a study of the progress of individual pupils very unsatisfactory. Often children are moved from one district to another several times during their years in school.

4. Variation between given names entered in the register and those written by the pupils prevented the completion of some cards. Absences, too, left many cards without language entries, while promotions during the year without corresponding changes in the room numbers on the register made the finding of corresponding slips in large numbers of cases exceedingly tedious.

These difficulties have been overcome by the adjustment of method to suit the available data. The ages and languages of pupils now enrolled in each grade have been considered rather than the progress of individual pupils through the grades, and cards on which the data are incomplete have been rejected.

5. A still more important consideration remains, however, in the problem of singling out this factor of language and dissociating other factors from it. Racial differences, individual differences, and social and economic conditions are so intimately connected with language that a complete separation is scarcely possible. Approximately to eliminate them the study has been carried on in districts where, with possibly one exception, similar social and economic conditions prevail. Wealthy residential sections of the city have not been included. Nor have schools in which English-speaking children largely predominate been compared with schools in which foreign-speaking children predominate. Moreover, the foreign-speaking pupils have been segregated in their own national groups and these, as well as the totals, have been compared with English-speaking pupils in the same school. Finally, the totals of each group in all the schools have been combined for the purpose of deducing more general conclusions.

The enrolment and the number of grades studied in the various schools are shown in the following table, together with the number of foreign-speaking and English-speaking pupils:

TABLE III

School	Total Attendance	Grades for Which Data Were Secured	Foreign Pupils	English-Speaking Pupils
A	897	I–VIII	545	197
B	829	III, V, VIII	155	140
C	500	III–VIII	.....	.....
D	1,903	III–VIII	586	75
E	1,614	III–VIII	556	163
F	520	II–VIII	112	89
G	1,151	III, V, VIII	125	193
			2,113	900
Total pupils			3,013	

In School A and School B it was possible to determine the nationality of the pupils from the enrolment cards. A comparison between nationality and home language for 881 pupils of other nationality than those for whom English is the mother-tongue shows 677, or 77 per cent, using their foreign vernaculars; 167, or 19 per cent, using English, and 37, or 4 per cent, using both. The complete table is as follows:

TABLE IV

Nationality	Using English	Using Mother-Tongue	Using Both	Total
Austrian	.....	1	.....	1
Bohemian	1	3	.....	4
Belgian	1	.....	.....	1
Danish	8	1	2	11
Dutch	6	11	1	18
French	3	2	.....	5
German	50	58	7	115
Hungarian	.....	41	1	42
Italian	5	82	.....	87
Jewish	13	32	1	46
Lithuanian	.....	5	.....	5
Norwegian	6	4	1	11
Polish	11	318	5	334
Russian	.....	5	1	6
Servian	.....	1	.....	1
Slavish	1	46	1	48
Swedish	62	66	12	140
Yiddish	.....	1	3	4
Welsh	.....	.....	2	2
	167	677	37	881

Of the Germans, Swedes, Danes, and Norwegians, a large percentage use English; of the Poles, Hungarians, Italians, and Slavs, a low percentage.

EXPLANATION OF TABLES AND CHARTS

In the first column are given the half-years of age for pupils in each grade; in the second column, the half-years under age (marked −), and over age (marked +), measured from the arbitrary standard of six for Grade I, seven for Grade II, and so on. In the third column (marked A) is given the number of pupils of the language indicated at the head of the column for each half-year of acceleration or retardation. In the fourth column (marked B) are given the products of columns two and three, with plus and minus signs preserved. Under languages represented by but few pupils the B column is omitted. The algebraic sum of column B divided by the sum of column A gives the average acceleration or retardation per pupil measured in half-years. Below the average the mode in half-years of retardation has also been entered. This indicates the age at which the largest number of pupils are found.

In all cases throughout the tables the average and mode are found in retardation, not in acceleration, since the accelerated pupils, measured from the arbitrary standard, are few.

Subjoined to many of the retardation tables are tables indicating the class standing of pupils in the various language groups. The letters E, G, F, and P stand for excellent, good, fair, and poor. At the bottom of the table the mode for each group is shown.

In preparing the charts percentages have been used for the frequencies instead of absolute figures. The ordinate in all the charts represents frequencies. The abscissa in the retardation charts represents acceleration and retardation in half-years (+ and − respectively); in the class-standing charts, it represents relative ranks as indicated by the letters. The figures in parentheses, placed before the names of the various groups, give the number of pupils represented in the curve.

For the purposes of this article only a few of the individual

class tables and charts need be given. The combined class tables, which will be presented in full in the next number, furnish a basis for drawing more general conclusions than could safely be drawn from these of the separate classes.

SCHOOL A

In Grade I of this school (Table V) the Polish pupils are in the majority. Their average retardation falls a little below that of the total foreign group, but is a half-year in excess of the retardation of the English-speaking group. This is indicated by the difference in the mode as well as in the average. In the mode with the English pupils are the Germans, Swedes, and Hungarians. The Slavs fall into the mode of the Poles.

No doubt the prevailing similarity in the tables is due to the fact that age six is the time when most children are started to school, and differentiation in ages and class ranks has not yet been established. In both the graphs prepared for this class (Chart I) the uniformity of the various curves is apparent.

In Grade II the English-speaking group was found to pass above all the others in retardation except the Hungarians. The Jews, with but half a dozen pupils, showed the least. In class standing there was essential similarity, the foreign pupils receiving a larger percentage of G's, and the English pupils more E's.

In the succeeding tables and charts of this school the advantage was decidedly with the English pupils, except in Grade VIII. In that grade the average retardation for them was 2.37 half-years; for the others, it was only 2.0 half-years. The English pupils, however, had two half-years advantage in the mode. Only at one other point were they surpassed in average, viz., by the Swedes in Grade IV, where all the groups, except the Swedish, were abnormally high in their retardation. The Polish children in the class had an average retardation of 6.66 half-years.

Several of the charts, notably those for Grades VI and VIII, showed decided difference in mode in favor of the English children.

CHART I

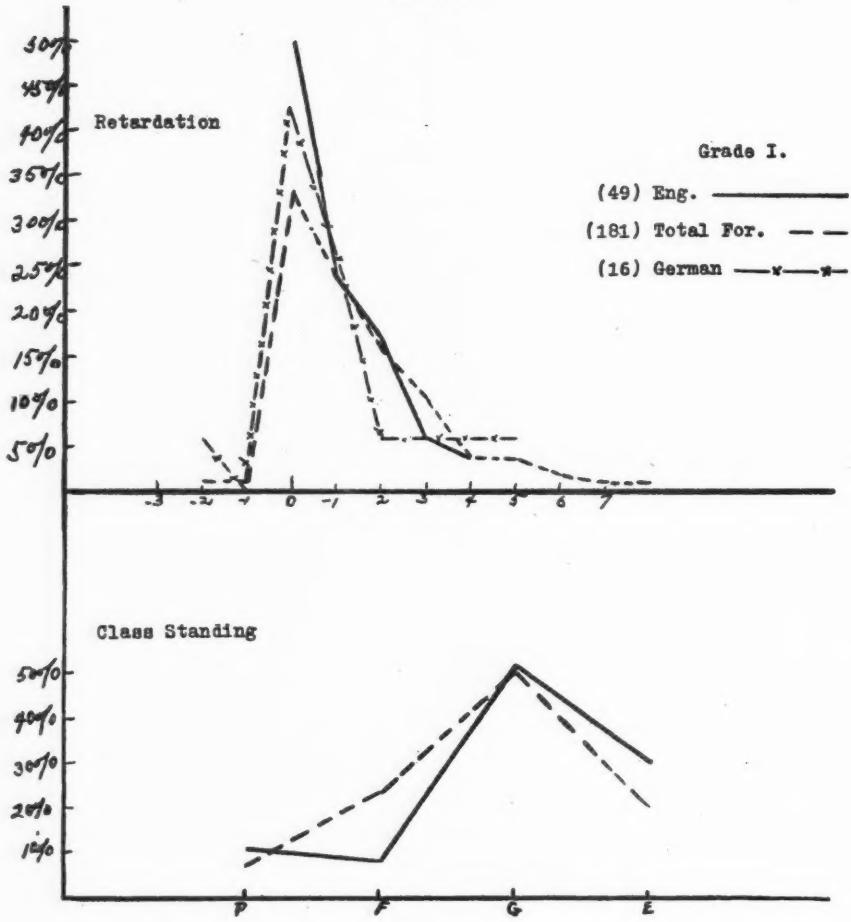

Retardation
Grade I.
(49) Eng.
(181) Total For.
(16) German
Class Standing
P
F
G
E

TABLE V

SCHOOL A—GRADE I

Ages	Half-Years Under and Over Age	Polish		German		Slavish		Swedish		Hungarian		Misc.	Total Foreign		English Speaking	
		A	B	A	B	A	B	A	B	A	B	A	A	B	A	B
		No. of Pupils	Total Half-Years Accelerated and Retarded													
5....	−2	1	−2	1	−2	....	....	....	....	....	....	....	2	−4	....	....
5½...	−1	2	−2	....	....	....	....	....	....	....	....	....	2	−2	....	....
6....	0	38	....	7	....	2	....	6	....	4	....	3	60	....	24	....
6½...	+1	34	34	4	4	4	4	....	....	2	2	....	44	44	12	12
7....	+2	22	44	1	2	3	6	2	4	3	6	....	31	62	8	16
7½...	+3	14	42	1	3	2	6	1	3	1	3	1	20	60	3	9
8....	+4	4	16	1	4	2	8	1	4	....	....	....	8	32	2	8
8½...	+5	5	25	1	5	1	5	....	....	....	....	1	8	40	....	....
9....	+6	2	12	....	....	....	....	1	6	....	....	....	3	18	....	....
9½...	+7	1	7	....	....	....	....	....	....	....	....	....	1	7	....	....
10½...	+9	....	....	....	....	1	9	....	....	....	....	....	2	18	....	....
Totals		123	176	16	16	15	38	11	17	10	11	5	181	275	49	45
Average ret. in half-years....			1.43		1.0		2.53		1.54		1.1			1.52		0.92
Mode of ret. in half-years....			1		0		1		0		0			1		0

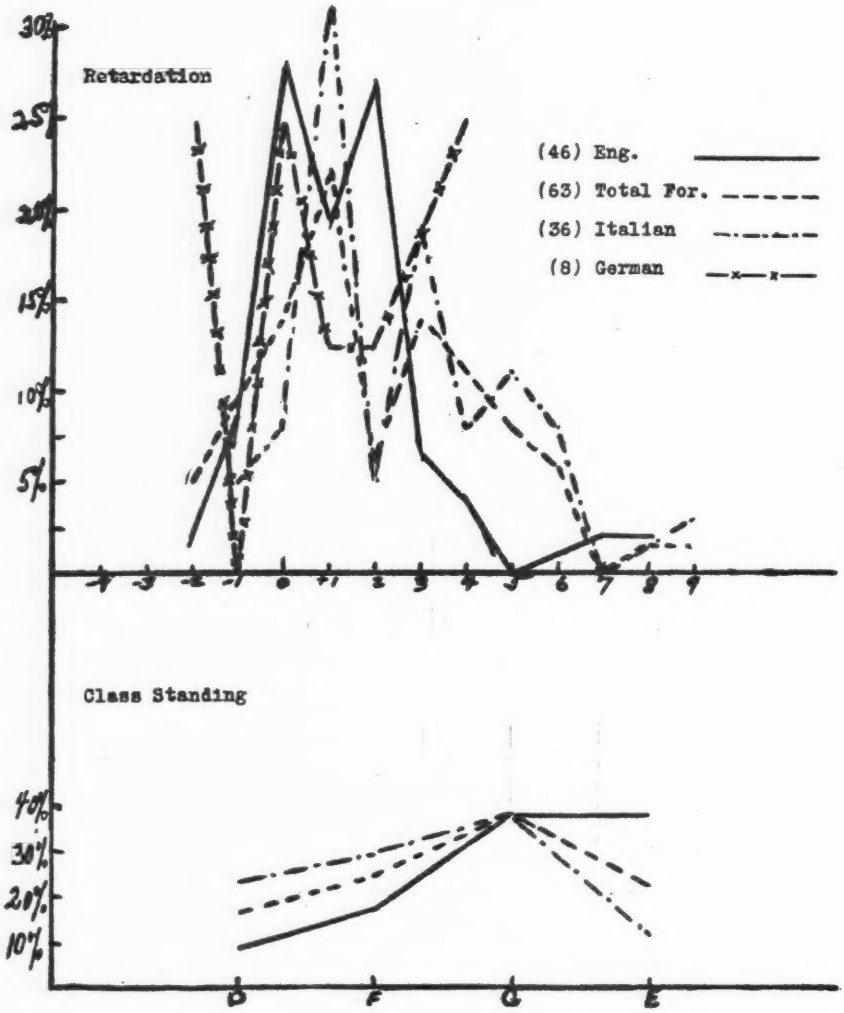
CLASS STANDING

	German	Slavish	Polish	Swedish	Total Foreign	English Speaking
E.....	5	4	17	5	34	15
G.....	5	7	65	2	89	25
F.....	3	1	32	3	40	4
P.....	2	3	6	1	13	5
Mode.....	G	G	G	E	G	G

SCHOOL B

This is a community in which there is a large percentage of Italians. The English group was surpassed by all the others in Grades III and VIII as regards average. In all three of the grades

CHART II


Retardation
30%
25%
20%
15%
10%
5%
(46) Eng.
(63) Total For.
(36) Italian
(8) German
Class Standing
40%
30%
20%
10%
D
F
G
E

measured it was equal or ahead in mode. As shown by the charts, it was really bi-modal in each case. Chart II shows Grade V.

The heavy elimination of the foreign element in the successively higher grades was shown by the relation between its numbers and those of the English-speaking: in Grade III, 63 of the former to 26 of the latter, in Grade V, 63 to 46, in Grade VIII, 29 to 68. The Swedes and Germans held their own, but the Italians dropped from 36 in V to 9 in VIII.

SCHOOLS G, E, AND D

In each of the three grades investigated in School G the English-speaking pupils were found to have the least average retardation, and in each grade except VIII the lowest mode. In this grade there was a clearly marked difference of one-half year. More Germans were found in this district than in any other; of Italians, Poles, and Hungarians, there were very few; of Swedes, an average number.

School D is in an overwhelmingly Italian section of the city. School E is in an equally overwhelming Jewish section. The averages and modes of the total foreign column, accordingly, are determined entirely by the averages and modes of these two respective groups.

In Grades III and VII of School D only one more pupil was found in the total foreign group than in the Italian. In VIII there were only Italians. In each grade except Grade VI the English-speaking children showed less average retardation than the others. Their mode in this grade showed less, and in each of the others showed the same or less.

In School E some have given Yiddish as their language, but aside from this there are only seven that appear outside of the Jewish or English columns. Those who have entered Yiddish have been included with the Jewish in the final classification. In Grades V and VI the English group proved to be more retarded than the Jewish and Yiddish groups. In Grade IV it was more retarded than the total foreign group. This last differed from the Jewish by but one pupil. As regards mode the English pupils ranked even, or ahead, in each grade. The results for Grade VIII are shown in Table VI and Chart III.

CHART III

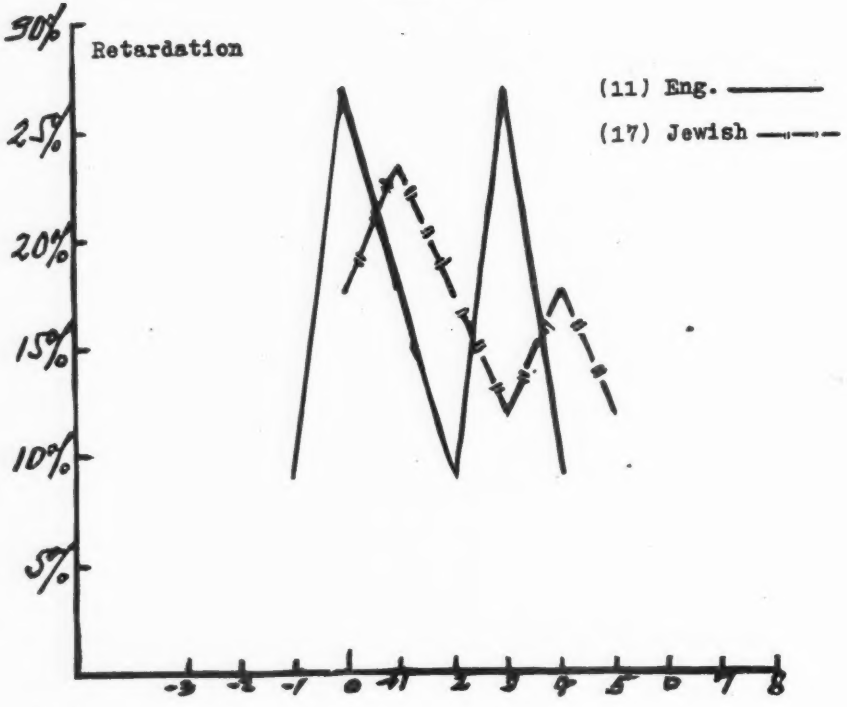


TABLE VI

SCHOOL E—GRADE VIII

AGES	HALF-YEARS UNDER AND OVER AGE	JEWISH		ENGLISH SPEAKING	
		A No. of Pupils	B Total Half-Years Acc. and Ret.	A	B
12½	−1	.....	.....	1	−1
13	0	3	.....	3	.....
13½	+1	4	+4	2	+2
14	+2	3	6	1	2
14½	+3	2	6	3	9
15	+4	3	12	1	4
15½	+5	2	10	.....	.....
Totals		17	38	11	16
Average retardation			2.24		1.45
Mode			1		0

SCHOOLS C AND F

These two schools have a majority of their pupils Italians, though many other nationalities are represented. Of School F it may be said in general that irregularity of relative standing was found to be the most characteristic feature. In School C the English-speaking children showed less retardation than the others in each grade except VII. Only twelve cards all told were secured in this class. This is too few for anything approaching accurate comparison.

The following tables and charts will illustrate the conditions that obtain. Vable VII and Chart IV represent Grade III in School C and Table VIII and Chart V represent Grade IV in School F.

Throughout the tables and charts of the separate classes in each of the seven schools there has been much variation. In the larger percentage of cases the English-speaking pupils have shown least retardation. There have, however, been a number of marked exceptions. Five times they have been excelled in average by the Italians, once by the Germans, twice by the Swedes, three times by the Jews, once each by the Poles and Slavs, and six times by the total foreign group. In mode many groups have been equal to the English. Twice the Italian and total foreign groups have

TABLE VII

SCHOOL C—GRADE III

AGES	HALF-YEARS UNDER AND OVER AGE	ITALIAN		CHINESE	JEWISH	YIDDISH	TOTAL FOREIGN		ENGLISH SPEAKING	
		A No. of Pupils	B Total Half-Years Acc. and Ret.	A	A	A	A	B	A	B
8				1			1			
8½	+ 1	2	2				2	2		
9	+ 2	6	12				6	12	3	6
9½	+ 3	9	27		1		10	30	2	6
10	+ 4	7	28				7	28	3	12
10½	+ 5	4	20			1	5	25	2	10
11	+ 6	1	6		1		2	12	2	12
11½	+ 7	4	28				4	28	1	7
12	+ 8	1	8				1	8		
12½	+ 9	2	18				2	18	1	9
13	+10	1	10	1			2	20		
14	+12	3	36				3	36		
Totals		40	195	2	2	1	45	219	14	62
Average ret			4.87					4.87		4.43
Mode			3					3		4

CHART IV

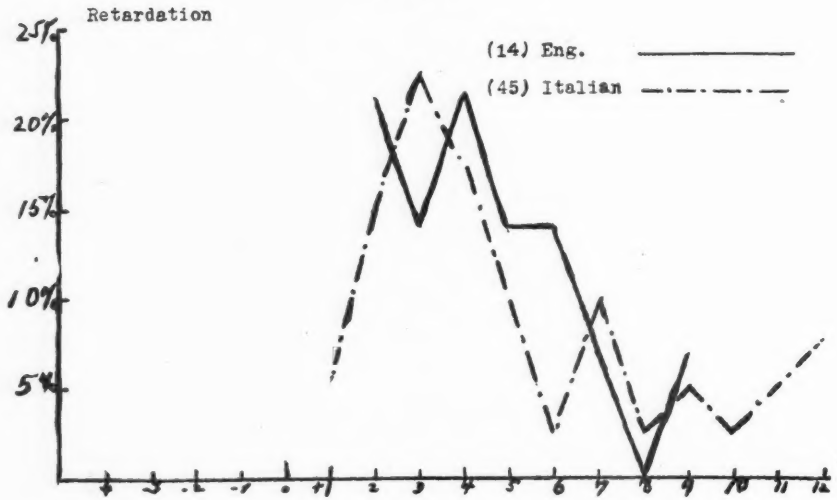


CHART V

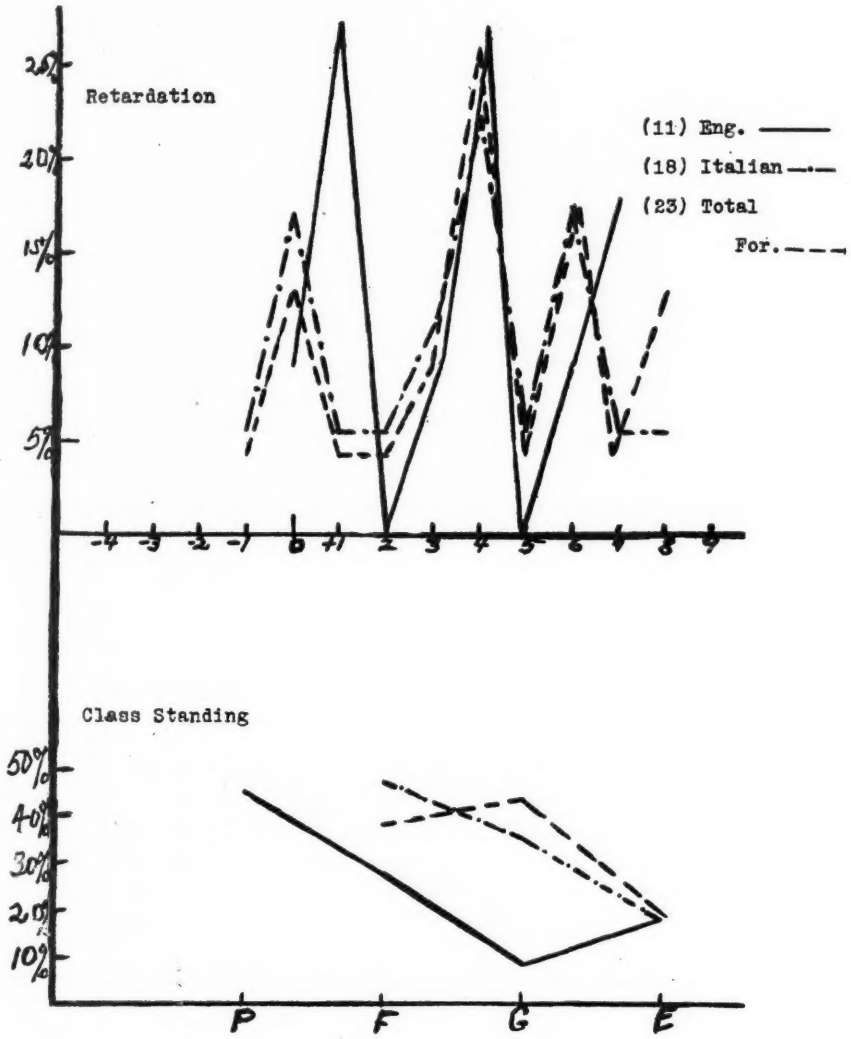

Retardation
(11) Eng.
(18) Italian
(23) Total For.
25%
20%
15%
10%
5%
-4 -3 -2 -1 0 +1 2 3 4 5 6 7 8 9
Class Standing
50%
40%
30%
20%
10%
P F G E

TABLE VIII

SCHOOL F—GRADE IV

AGES	HALF-YEARS UNDER AND OVER AGE	ITALIAN		GREEK	JEWISH	PERSIAN	TOTAL FOREIGN		ENGLISH SPEAKING	
		A	B	A	A	A	A	B	A	B
		No. of Pupils	Total Half-Years Acc. and Ret.							
8½	−1	1	−1	.....	.....	.....	1	−1	.....	.....
9	.....	3	.....	.....	.....	.....	3	.....	1	.....
9½	+1	1	1	.....	.....	.....	1	+1	3	+3
10	+2	1	2	.....	.....	.....	1	2	.....	.....
10½	+3	2	6	.....	.....	.....	2	6	1	3
11	+4	4	16	1	.....	1	6	24	3	12
11½	+5	1	5	.....	.....	.....	1	5	.....	.....
12	+6	3	18	.....	1	.....	4	24	1	6
12½	+7	1	7	.....	.....	.....	1	7	2	14
13	+8	1	8	.....	1	1	3	24	.....	.....
Totals		18	62	1	2	2	23	92	11	38
Average ret. in half-years			3·44					4		3·45
Mode of ret. in half-years			4					4		4

CLASS STANDING

	Italian	Total Foreign	English Speaking
E	3	4	2
G	6	9	1
F	8	8	3
P	.....	.....	5
Mode	F	G	P

shown a better mode; once the Germans have been ahead. In class standing there has been equal irregularity.

It will be of advantage, therefore, in deducing general conclusions to have the data for the separate classes presented in the form of combined tables and charts. These will be given in the next section of the study.

[*To be continued*]

RETARDATION, ACCELERATION, AND CLASS STANDING

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During the past decade, retardation, acceleration, and elimination have been in the forefront of discussion as important social and educational problems. Compulsory school laws have brought into the school system hosts of children of widely varying ability and maturity. This legislation and the growing consciousness of social responsibility for education, of which it is an evidence, have resulted in extensive provisions for defective and backward children, on the one hand, and in an influx of pupils who might otherwise not be in the system, on the other. These conditions have enormously complicated the problem of internal organization and adaptation of schools and curricula to the so-called normal child. Genetic psychology and child-study, the study of individual differences, and the practical experience of teachers have all shown that the concept of the normal child is a rather useless fiction. Pupils of the same age are strung out all along a vertical scale of maturity, on the one hand, and are distributed perhaps quite as widely on a horizontal scale of ability, on the other. Recent publications in popular journals of cases of unusual precocity have called attention afresh to this variability in rate of mental development. These cases have been wrongly interpreted as evidence of the inefficiency of the school system rather than as cases of unusually rapid maturity which the laws of variability would lead us to expect on rare occasions. If there is this variability, then chronological age is not an adequate index of mental or pedagogical age, and age-retardation statistics will give no satisfactory evidence of mental or pedagogical retardation. To furnish some data on this point and to indicate a method of inquiry which seems fruitful is the purpose of this paper.

Retardation is an ambiguous term that has come to be applied

to three very different things: (1) Retardation is used, e.g., by Witmer, to mean slow or arrested mental development. The retarded child is one the functions of whose brain are not developed up to the normal limit for his age. (2) Retardation refers merely to age-in-grade. The retarded child is one who is over-age, or behind the grade for his age, regardless of whether it is due to late entrance, absences from school, slow mental development, or lack of ability. (3) Retardation relates solely to the progress of the child in school. The retarded pupil is one who makes slow progress, the repeater, who takes more than the normal time to complete a prescribed course. The relation between these different conceptions of what retardation means has not been satisfactorily worked out and the reader of the already voluminous literature finds it hopelessly confusing.

Most of the numerous statistical investigations by Thorndike, Ayres, Strayer, Falkner, Lurton, etc., have been concerned with age-retardation, the determination of the percentage of pupils over-age, under-age, and of normal age in the various grades. In some of the studies there is an apparent assumption that age-retardation is indicative of mental retardation, that the retarded or over-age pupil is also a backward or a maladjusted pupil. Ayres, e.g., says: "The child of nine acts and thinks differently from the child of seven. Put the two in the same class and the work of the teacher is increased. The amount of attention which can be given to each is diminished, and the effect of the teaching is therefore lessened. No one can doubt that it would be a very great advantage if children could be so classified that the classes would be more homogeneous with respect to age." This assumption that growth in maturity is closely correlated with age is unwarranted. The child of nine may be mentally a child of seven or one of eleven. It may well be that the age-retarded pupil who is only a year or two over-age is classified with the group where he can work to the best advantage. If so, then retardation is not the serious evil it has been claimed to be. The good of the school and the good of society may best be served by having the child of nine years classed with children of seven or of eleven. Homogeneity in classes is of course

greatly to be desired but it is not necessarily accomplished by placing children of like chronological age together, but by placing together children of like mental age. Classification by size would probably be as useful for purposes of securing homogeneity as classification by chronological age.

The real problem of retardation is thus psychological rather than administrative and economic. What is needed for purposes of gradation of pupils is some measure of mental maturity, such as, for example, the much-discussed Binet scale of intelligence, which will enable us to determine mental age more accurately. Such tests are being applied in various sections of the country and the results will be awaited with interest.

In the meantime, it seemed worth while to study the school records of retarded, normal, and accelerated pupils to determine what qualitative differences are shown by each of the groups in school work measured by the schools' own standards of capacity and attainment. It is only by such a study that the real significance of retardation can be discovered. From the pedagogical and psychological points of view the important problem is whether there is actually such maladaptation as the age statistics suggest and whether age-retardation is correlated in any way with mental retardation. The specific questions raised were: What are the class standings of the retarded, accelerated, and normal pupils? Are the standings of the retarded pupils lower than those of the normal pupils? How are the standings distributed among the different kinds of retarded, normal, and accelerated pupils? Is there any alteration in the distributions up the age-scale?

Data on the amount of retardation and acceleration were obtained for 2,023 pupils in elementary schools of Madison through the kindness and co-operation of Superintendent Dudgeon. For assistance in the collection and tabulation of the data I am indebted to Mr. J. A. Stevenson, of Chicago, Illinois, and Mr. B. F. Adams, of Cambria, Wisconsin.

Table I gives the distribution of the children through the grades, the number accelerated, the number retarded, and the number of normal age.

TABLE I

	1	2	3	4	5	6	7	8	Total
Total number	286	315	326	275	225	226	206	164	2,023
Normal	178	157	160	112	79	93	75	66	920
Retarded	48	99	111	138	112	90	86	77	761
Accelerated	60	59	55	25	34	43	45	21	342

Table II gives the distribution in percentages.

TABLE II

	1	2	3	4	5	6	7	8	Total
Normal	62.2	49.8	49.1	40.7	35.1	41.1	36.4	40.2	45.5
Retarded	16.8	31.4	34.0	50.2	49.8	39.9	41.7	47.0	37.6
Accelerated	21.0	18.8	16.9	9.1	15.1	19.0	21.9	12.8	16.9

The age-standard for each grade has occasioned much controversy. Ayres[1] considers a pupil of normal age if, in the first grade, he is under eight years, in the second grade, under nine, etc. The Ayres standard thus allows an extra year for each grade. Its effect may be to conceal one year of retardation or repetition. On this standard, as applied to schools of the Middle West, it would be possible for every pupil in the system to enter at six years, the most frequent entering-age, to repeat a year, and still not be retarded according to the age statistics.

Lurton[2] in a study of retardation statistics from smaller Minnesota towns notes this point. He says that in every system covered by his investigation the children are admitted at six years of age or younger. He therefore reckoned the entering-age at six. Further, in every one of the schools studied, promotions are made once a year, in June. Each grade, by definition, means a year's work. Therefore, the child who enters the first grade at six should enter the second grade at seven, the third grade at eight, and so on. From the administrative point of view, the child who enters at seven is behind the prescribed schedule.

[1] L. P. Ayres, *Laggards in Our Schools*.

[2] F. P. Lurton, "A Study of Retardation in the Schools of Minnesota," *Science*, N.S., XXXIV, No. 884, December 8, 1911.

This age-standard is practically the one employed in this study. The date of birth and the average of the marks assigned for the school year 1910–11 were obtained for all pupils from the school records. The pupils were then classified into three groups according to the following age-standard:

	Retarded	Normal	Accelerated
First grade....	If born be ore September 1, 1903	If born between September 1, 1903, and September 1, 1904	If born after September 1, 1904
Eighth grade..	If born before September 1, 1896	If born between September 1, 1896, and September 1, 1897	If born after September 1, 1897

On this basis the amount of retardation in the Madison school system is much less than that reported by Lurton.[1] For fifty-five city systems in Minnesota with the same age-standard, so far as I can judge from his statement, he finds 58.9 per cent retarded, 34.2 per cent normal, and 7.1 per cent accelerated pupils. The corresponding figures here are 37.6 per cent, 45.5 per cent, and 16.9 per cent, showing less retardation and more acceleration. The legal entering-age in Minnesota is five years, with the further provision that school boards may exclude children under six years, while that of Wisconsin is four years, though the most frequent entering-age in both states is six years. This may in part account for the difference in the results.

Charts 1 and 2 give the median class standings and the distribution of these standings for the three groups of pupils by grades.

An inspection of the medians and of the distribution-curves shows very clearly that, while the median standings are highest for the accelerated pupils and lowest for the retarded, the differences are not great and the overlapping in the curves is so marked that the differences lose significance. The noteworthy thing is that the range of variability is in general quite as great for one group as for the other or for all the pupils of a grade. Age-retardation is no index of inferior mental ability nor is acceleration an index of superior ability. Greater homogeneity in these classes would not,

[1] *Ibid.*

CHART I.—The comparison of the distribution of the marks received by pupils who have progressed at the normal rate (N), are retarded (R), or advanced (A) with the median standings.

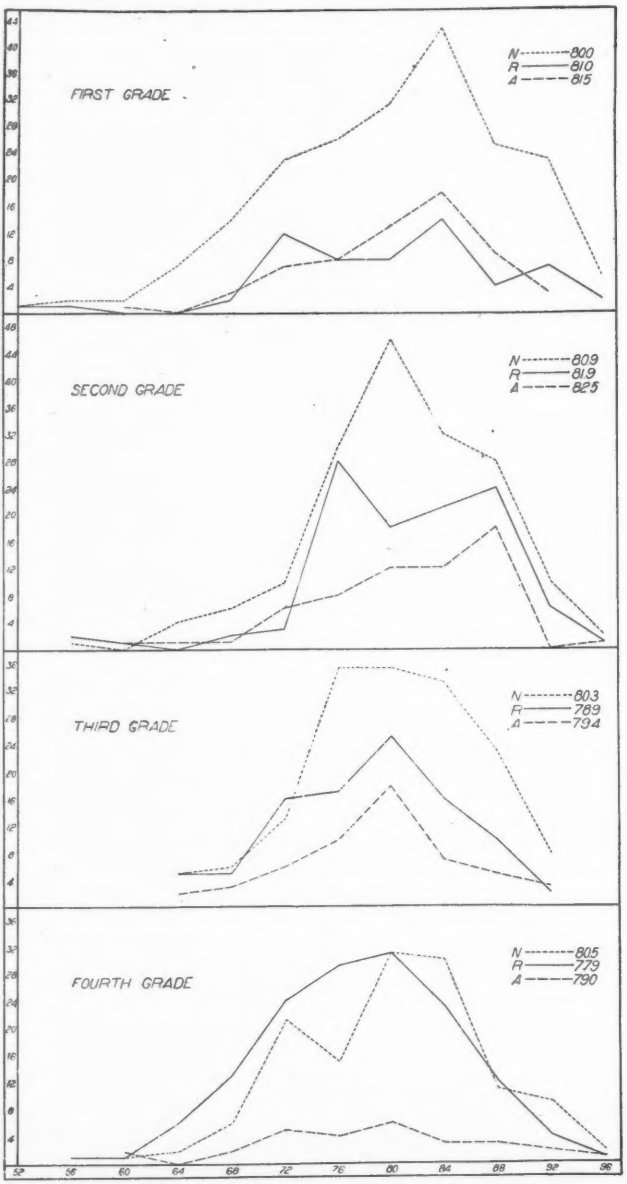
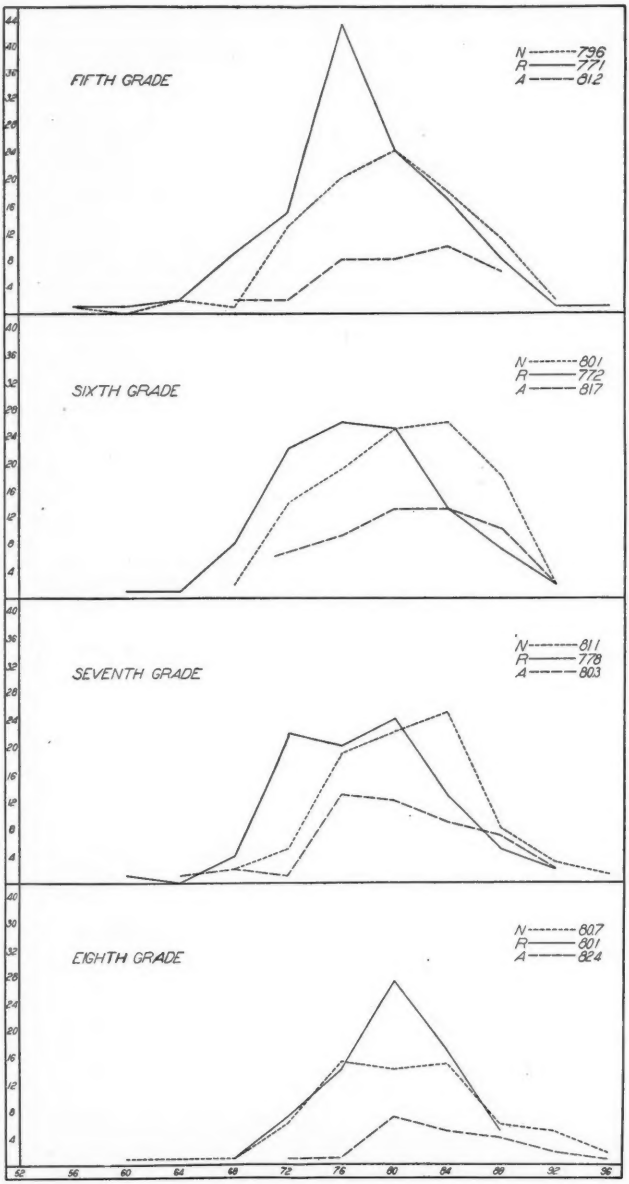


CHART I.—*Continued*



therefore, be secured on a basis of greater likeness in age-in-grade. Classification by similarity in ability or attainment, moreover, would include relatively about as many from one group as from either of the others, except in the sixth and seventh grades. There is a tendency to a sharper differentiation between the retarded and normal pupils beginning in the fifth grade and culminating in the seventh where the differences in the medians are considerable. Greater difficulty in work, greater rigor in the assignment of marks, and the accumulation of repeaters and over-age pupils who are but waiting to escape the operation of the compulsory school law account in large part for this fact.

The classification of pupils as retarded, normal, and accelerated, and a study of their average performances do not carry us very far. The retarded group may include (1) those who entered late but who may have made normal progress or even faster than normal progress; (2) those who entered at the normal age but who have been put back in change of schools, or who may have been kept out a year because of illness; (3) those who have repeated because of slow development or because of lack of ability, etc. Similarly, the normal group may include (1) those who entered at the normal age and progressed at the normal rate; (2) those who entered late one or more years and have gained one or more years; (3) those who entered early and repeated, etc. With a view to such detailed analysis of the performances of the different types of retarded, normal, and accelerated pupils, it was necessary to know the number of years the pupils had been in school. The school records unfortunately did not give this information and it could not be obtained until September, 1911. In the meantime, transfers, withdrawals, etc., reduced the number for whom complete data could be secured to 1,301 pupils from the first to the seventh grades, inclusive.

Table III gives the number of pupils and the average standings for all of the different types of retardation, normality, and acceleration.

The table is self-explanatory; a word only with reference to the effect of age of entrance on standings will make its meaning clear. There were in all 347 pupils of normal age and normal progress, i.e.,

a year for each grade, with an average standing of 79.7 per cent. It is particularly interesting to compare with this group those pupils who have made normal progress in school but who are over-age or retarded one or more years. There were 180 such pupils who entered a year late, or who dropped out for a year and then re-entered, with an average standing of 78.7 per cent; 47 pupils retarded two years, with an average standing of 78.6 per cent;

TABLE III

	Accelerated		Normal Age	Retarded					
	2 Yrs.	1 Yr.		1 Yr.	2 Yrs.	3 Yrs.	4 Yrs.	5 Yrs.	6 Yrs.
Advanced 3 years				2 79.5					
Advanced 2 years		2 85.0	1 86.0	1 75.0					
Advanced 1 year	1 87.0	14 81.9	23 79.2	14 82.0	3 78.3	3 77.7	2 83.0		1 69.0
Normal progress	13 81.4	142 78.9	347 79.7	180 78.7	47 78.6	13 78.7	5 75.8	2 79.0	1 60.0
Repeated 1 year	5 78.4	18 80.0	83 78.5	130 78.6	67 77.5	41 76.8	16 77.8		
Repeated 2 years		1 82.0	12 79.6	20 77.7	26 77.1	34 78.8	8 74.6	3 77.0	1 73.0
Repeated 3 years				2 74.5	6 76.3	5 72.0	4 79.2		
Repeated 4 years						1 81.0			
Repeated 5 years									1 70.0

13 retarded three years, with an average standing of 78.7 per cent. In other words, the pupils who were one, two, or three years older, and hence, supposedly more mature, and who had been in school the normal number of years for their grade, do no better, but rather a little worse, than those of normal age. Similarly, the 142 pupils who entered a year early and progressed at the normal rate had an average standing of 78.9 per cent, a little less than the standing

of those of normal age and progress and identical with that of pupils retarded one, two, or three years. So far as one is able to judge from teachers' estimates of performance as indicated in assigned marks, and I know of no other method by which a better judgment can now be secured, the pupils are classified with considerable accuracy. One finds here in fact 750 pupils who have made normal progress distributed over a range of seven age groups (two pupils retarded five years and one retarded six years being disregarded), with substantially the same class standings for each age group.

TABLE IV

	No. of Pupils	Standings	P. E.
1. Accelerated and advanced	17	82.6	±1.3
2. Accelerated but normal progress	155	79.2	±0.4
3. Accelerated but repeated	24	79.8	±1.0
4. All accelerated	196	79.5	±0.35
5. Normal age but advanced	24	79.5	±1.0
6. Normal and normal progress	347	79.7	±0.25
7. Normal but repeated	95	78.2	±0.5
8. All normal age	466	79.4	±0.25
9. Retarded but advanced	26	79.9	±1.0
10. Retarded but normal progress	248	78.6	±0.35
11. Retarded and repeated	365	77.7	±0.25
12. All retarded	639	78.1	±0.2
13. Repeated 3 or more years	19	75.5	±1.2
14. Repeated 2 years	105	77.9	±0.5
15. Repeated 1 year	360	78.2	±0.25
16. All repeaters	484	78.0	±0.25
17. Normal progress	750	79.8	±0.20
18. Advanced 1 year	61	80.3	±0.65

The average standings of the various classes of pupils, which the classification by age and progress make it possible to analyze, together with an indication of the range within which the standings are statistically reliable, are shown in Table IV.

The noteworthy feature of the table is the slight difference in the average standings of the different classes of pupils. Aside from the first group, which includes the bright and precocious children (and their standings are not high enough to indicate serious mal-

adjustment), there are nine groups with substantially the same average standings. Exception should be made of group 7, the repeaters of normal age, but the difference, while significant, is not great. Such close agreement in standings was unexpected by the writer. It will be interesting to discover whether it prevails in other school systems as well. Objection can, of course, be made that statistical averages obscure the evils of bad classification, but such detailed analysis as is presented here should have shown any significant differences if they existed. At any rate, this inference from statistical averages is sounder than from individual cases of maladjustment.

The average performances of the retarded pupils are lower than those of the normal and accelerated pupils but the differences are again so slight as to be of little significance. Even the repeaters, on the average, attain marks but little below the normal except in the case of those who have repeated three or more years. School marks are notoriously unreliable but they are the best estimates we have of a pupil's ability to do the work of the school.

The general impression which the writer and his collaborators have obtained from the study of the average performances of the different types of pupils as well as from the individual marks is one of surprise, in view of current opinion, at the smallness and the character of the differences in scholarship. We should have expected the distribution-curve for the accelerated pupils to be skewed positively, and that of the retarded pupils to be skewed negatively. While such is the case, the differences in the character of the curves is not great. Even the repeaters who are supposed to be a drag upon a class keep approximately much closer to the average than is usually supposed.

A study of this character in a school system with three thousand or four thousand pupils in which careful records were kept of age, progress, and performance would permit a detailed analysis for the various classes of pupils in each grade. The number of cases in this investigation unfortunately does not make possible with sufficient reliability such a separate treatment by grades. If, in addition, separate marks were secured for ability, attainment, and effort or diligence, valuable information would be available. One pupil

of A ability may do B work because of C diligence or effort. Another may be of C ability, but do B work because of A diligence or conscientiousness. Teachers commonly estimate pupils in this way but make no separate records of such estimates. Marks assigned are often, if not usually, compounded from such judgments. So a pupil of C ability and C attainment may, and often is, given a mark of B because of his superior conscientiousness in work. The significance of school marks is therefore obscure. With complete records from a large school system we should obtain much better information than we now possess concerning the various classes of accelerated, normal, and retarded pupils, the significance of the entering-age, the relation of work in the kindergarten to progress in the elementary school, and the adjustment or maladjustment of the curriculum to the pupils.

BOOK REVIEWS

The German System of Industrial Schooling. By RALPH C. BUSSER, American Consul, Erfurt, Germany. Philadelphia, Pa.: Published by Public Education Association. Pp. 63.

The report is timely, coming, as it does, when educators and the general public alike are anxious to know what can be learned from the German industrial schools which will be pertinent to the American problem of education. The author states that his purpose is not to describe the organization and methods of these schools in detail, but rather to set forth the general principles on which the system is founded. He states, at the outset, the most significant of these principles when he says: "This system represents the result of many years' study and experience of the German people in endeavoring to solve the problems involved in the education of the *industrially employed youth* of the manufacturing communities."

He shows that Germany has, in truth, a "system" and that it is nicely adjusted to the purpose above mentioned. This system includes the common schools themselves, general trade schools, special trade schools, and engineering and scientific schools, thus offering progressive education for every grade of industrial worker.

Industrial continuation schools are generally a "part of the public-school system" and are supported by the local community, usually with state aid. "The total expenditures in Prussia for the industrial continuation schools amounted in 1911 to $2,304,792, of which 52 per cent was borne by the municipalities, 35 per cent by the state, 2 per cent by associations and gilds, and 11 per cent by employers' contributions consisting of tuition fees which they are bound to pay for the employes, together with the sum which some of them contribute voluntarily."

The common schools lead naturally to the continuation schools in which not only trade subjects are given, but also physical, business, and civic training.

One chapter discusses "Trade Schools as a Substitute for Apprenticeship," another "Auxiliary Educational Facilities," while the final chapter deals with the relation of the schools to national industry. This shows that the splendid industrial success of Germany has not been a mere accident, but it also makes it clear that neither is it due to the industrial schools alone, or perhaps even mainly, but rather to the appropriateness of these schools to the whole social, economic, and political structure of the Empire.

Paper and Cardboard Construction. By GEORGE FRED BUXTON and FRED L. CURRAN. Peoria, Ill.: Manual Arts Press. Pp. 191. $1.50.

This is a handbook for teachers desiring to give instruction in paper and cardboard work suitable for children in the primary grades, though the work is capable of application as high as the fifth grade. It contains just the kind of information which the grade teacher needs to enable her to carry on the work with pleasure and profit, both to the pupils and to herself. The information is both technical and

general, serving to secure accurate and purposeful methods of work and also to show the relations which may be established between this work and everyday life.

A considerable variety of material is introduced and the problems are presented in the form of finished projects which are grouped under four heads: books, boxes, cards, and envelopes. These four types of problems involve a variety of processes including cutting, measuring, folding, pasting, gluing, sewing, punching, tying, and also the planning and application of suitable decorations.

The book also contains valuable chapters on the organization of courses, and on the purchase, distribution, and handling of supplies and equipment. The chapters are both technical and informational and give hints for correlating the work with other school subjects.

The volume itself is an excellent example of "paper and cardboard construction," being well printed and profusely illustrated. It will be a boon to grade teachers who are required to give instruction in manual training in the grades covered.

FRANK M. LEAVITT

UNIVERSITY OF CHICAGO

Social Forces. A Topical Outline, with Bibliography. By MRS. A. L. QUACKENBUSH. Portage, Wis.: Published by the Education Committee of the Wisconsin Woman's Suffrage Association. Pp. 83. $0.15.

This text, prepared not for propaganda but for education in the problems of present citizenship, will be useful to teachers who want to know where to look for information, and how to direct others in the community who may come for suggestions. Its value for the layman as a select bibliography is great, and even the well-informed teacher will find himself much aided by the material here brought together. Some of the topics are "Government," "Labor," "Woman," "Educational Problems," "Lessons Other Countries Teach Us."

J. H. TUFTS

UNIVERSITY OF CHICAGO

A Text Book on the Teaching of Arithmetic. By ALVA WALKER STAMPER, Head of the Department of Mathematics, State Normal School, Chico, Cal. New York: American Book Co., 1913. Cloth. Pp. 284. $1.00.

This volume is designed for those who are giving instruction or supervising the work in arithmetic in the elementary schools. It is especially designed for teachers new in the service.

The author devotes a small portion of his book to the history of arithmetic and to the reasoning involved in arithmetic. The chapter on "Preliminary Steps in Arithmetic" is especially helpful for the beginning teacher. Much emphasis is placed upon the principal operations in arithmetic. The application side of arithmetic as well as the place for algebra and geometry in the elementary school, as presented by the author, deserve special attention.

The author's views on lesson plans, course of study, character of problems, etc., will be of help to the reader. All in all, this book seems to be a very helpful guide to the teacher of arithmetic.

D. W. WERREMEYER

FORT WAYNE, IND.

A Cyclopedia of Education. Edited by PAUL MONROE, PH.D., and OTHERS. Vol. V. New York: Macmillan, 1913. Pp. 892. $5.00.

This volume completes the series of volumes of the *Cyclopedia of Education* and enables one to make a general survey of the whole work. This survey is materially aided by the analytical index which is a feature of the present volume. In this index all of the articles of the *Cyclopedia* are classified according to the general topic under which they come. Thus there is a section for history of education, for philosophy of education, psychology, etc. This index makes evident the fact, which has impressed the reader already, that the work is a comprehensive one. The index forms a very valuable part of the work, since it enables the student to follow systematically some subject by reading the articles as they appear in the classification.

There is nothing especially new to be said, aside from this, in regard to the present volume. It strikes one as having a particularly large number of articles upon psychological topics, as the fourth volume had many on state school systems. This of course, is the accidental result of the alphabetical arrangement. A few of these articles on the psychological aspects of education may be mentioned. On account of the growing application of laboratory methods to the study of educational problems, the article upon laboratory equipment in psychology will prove to be of value. The general article upon psychology gives an orientation in the subject, and the special discussion of educational psychology is timely in view of the great divergence of opinion and practice as to what should be included in this subject of the curriculum. There are three fairly long articles upon the psychology and pedagogy of the subjects of the elementary curriculum, namely, upon reading, spelling, and writing. Reading and writing have been the subjects most extensively investigated by psychological methods, and these articles present summaries of the results in these fields.

In addition to the above-mentioned there are a number of articles treating of the application of psychology to education. An article upon sense-training indicates the value of this form of discipline on the one hand and at the same time rightly warns against the uncritical attempt to train the senses without regard to the value of the result. The value of space perception and its training is the subject of another article. Social psychology in its various forms is shown to be of direct application to education. There is a very interesting article upon the education of children among primitive peoples. Contrary to common belief, this education is rather elaborate, although it is directed merely to the activities which are characteristic of the tribe in question. That is, the education is shown to be of a rather specific nature and to be conservative in its tendencies.

These may serve merely as illustrations of one type of article. There are, of course, a great many upon other topics, but it would be impossible to attempt anything like a review of the wealth of articles in this volume. In closing the notice of this final volume it may be said that the statement made in reviewing the first volume, that the work is one of the highest importance to all who are at all concerned with education, is entirely justified by the work as it now stands complete.

FRANK N. FREEMAN

UNIVERSITY OF CHICAGO

Essentials of Business Arithmetic. By GEORGE H. VAN TUYL. New York: American Book Co., 1913. Pp. 272. $0.70.

This book is suitable for use in classes in arithmetic in business schools and high schools, and especially for advanced classes in the elementary school. Short methods of solution are a valuable feature. The treatment of aliquot parts is adequate. The problems are practical and sensible, and most of them admit of variation to meet the conditions of the industrial and civic community. Business practices in calculation are explained clearly. The many definitions are adequate, but simple and brief. While the work is too advanced for most elementary-school classes, teachers of the upper grades will find the book of value as a reference book of modern business practices in computing.

Arithmetic by Practice. By D. W. WERREMEYER. New York: The Century Co., 1913. Pp. iii+80.

The teacher of mathematics in the upper grades will find in this book a great variety of practical problems that are full of content. They are in general not grouped according to mathematical principles involved, but the problems of each set call for the expression of number relations between facts which are related in business and home life. This is not a textbook, but is excellent for supplementary work.

HARRY O. GILLET

UNIVERSITY ELEMENTARY SCHOOL

BOOKS RECEIVED

AMERICAN BOOK CO., CHICAGO

Reading, Writing, and Speaking Spanish for Beginners. By MARGARET CAROLINE DOWLING. Cloth. Pp. 256. Illustrated. Price $0.75.

BOARD OF EDUCATION, CLEVELAND

Seventy-sixth Report of the Superintendent of Schools. Paper. Pp. 107.

BOARD OF EDUCATION, NEW ORLEANS

Annual Report of the Superintendent of Schools. Paper. Pp. 207.

GINN & CO., BOSTON

The Beacon First Reader. By JAMES H. FASSETT. Cloth. Pp. 160. Illustrated. Price $0.35.

HOUGHTON MIFFLIN CO., BOSTON

Songs and Stories for the Little Ones. By E. GORDON BROWNE. Melodies Chosen and Arranged by EVA BROWNE. Cloth. Pp. 143. Price $0.80.

The Teacher and Old Age ("Riverside Educational Monographs.") By CHARLES A. PROSSER. With the collaboration of W. I. HAMILTON. Cloth. Pp. 140. Price $0.60.

RAND McNALLY & CO., CHICAGO

Five Messages to Teachers of Primary Reading. By NETTIE ALICE SAWYER. Cloth. Pp. 219. Price $1.00.

The Four Wonders: Cotton, Wool, Linen, Silk. By ELNORA E. SHILLIG. Cloth. Pp. 137. Illustrated.

UNIVERSITY PRESS, CAMBRIDGE

Outlines of Victorian Literature. By HUGH WALKER, LL.D., and MRS. HUGH WALKER. Cloth. Pp. 224. Price 3*s*.

J. BIELEFELDS VERLAG, FREIBURG, BADEN

The Little Yankee. By ALFRED D. SCHOCH, PH.D., and R. KRON, PH.D. Cloth. Pp. 192. Price M. 3.

CURRENT EDUCATIONAL LITERATURE IN THE PERIODICALS[1]

IRENE WARREN
Librarian, School of Education, University of Chicago

Allen, I. M. Some experiments in high-school instruction. School R. 22:26–44. (Ja. '14.)

Bell, Clair Hayden. Experiences of an American exchange teacher in Germany. Educa. R. 47:28–56. (Ja. '14.)

Benson, C. E. Some thinking processes of grade children. Psychol. Clinic 7:189–97. (D. '13.)

Beyer, Thomas Percival. Creative evolution and the woman question. Educa. R. 47:22–27. (Ja. '14.)

Boas, Ralph Philip. The introduction to English literature. English J. 2:630–36. (D. '13.)

Bole, John A. The organization of a large high school. School R. 22:1–11. (Ja. '14.)

Bostwick, Arthur E. The making of an American's library. Bookman 38:531–36. (Ja. '14.)

Briggs, Thomas H. Formal English grammar as a discipline. Teach. Coll. Rec. 14:1–93. (S. '13).

Brown, Elmer Ellsworth. The need of better preparation of teachers for secondary schools. Educa. 34:201–6. (D. '13.)

Cohen, Helen Louise. The foreigner in our schools: some aspects of the problem in New York. English J. 2:618–29. (D. 13.)

Cubberley, Ellwood P. Politics and the country-school problem. Educa. R. 47:10–21. (Ja. '14.)

Curtis, John W. Manual and vocational education. Man. Train. M. 15:89–104. (D. '13.)

Davidson, Percy E. Professional training of school officers. Educa. R. 46:463–91. (D. '13.)

Doll, E. A. Mental and physical development of normal children. Train. School M. (N.J.) 10:113–20. (D. '13.)

[1] *Abbreviations.*—Atlan., Atlantic Monthly; Cent., Century; Educa., Education; Educa. Bi-mo., Educational Bi-monthly; Educa. R., Educational Review; English J., English Journal; Lit. D., Literary Digest; Liv. Age, Living Age; Man. Train. M., Manual Training Magazine; Outl., Outlook; Pedagog. Sem., Pedagogical Seminary; Pop. Sci. Mo., Popular Science Monthly; Psychol. Clinic, Psychological Clinic; School R., School Review; Teach. Coll. Rec., Teachers College Record; Tech. World M., Technical World Magazine; Train. School M. (N.J.), Training School Magazine (New Jersey); U.S. Bur. of Educa. Bull., United States Bureau of Education Bulletin.

Draper, Ernest G. The college man in business. Outl. 106:27–30. (3 Ja. '14.)

Dresbach, M. Ocular defects and their relation to the health and work of the student. Educa. R. 46:492–509. (D. '13.)

Dutton, Samuel T. The investigation of school systems. Educa. R. 47:57–64. (Ja. '14.)

Edgerly, Joseph G. A co-operative industrial course. Educa. R. 46:438–49. (D. '13.)

Edson, Andrew W. The New York school inquiry. Educa. R. 46:450–56. (D. '13.)

Experiments in dramatization. Educa. Bi-mo. 8:106–22. (D. '13.)
Keith, Kate. Dramatization in third grade.
Stellar, Florence. Making of a play in third grade.

Fuller, Robert J. Co-operation between the National Education Association and the National Society for the Promotion of Industrial Education. School R. 22:12–19. (Ja. '14.)

Gilbertson, A. N. Contributions of the Danish anthropological survey to child study. Pedagog. Sem. 20:542–48. (D. '13.)

Good and bad in the New York schools. Educa. R. 47:65–79. (Ja. '14.)

Guild, Thacher H. Suggestions for the high-school play. English J. 2:637–46. (D. '13.)

Hart, Joseph K. The democratic organization of a state university. Pop. Sci. Mo. 84:91–100. (Ja. '14.)

Hastings, Wells. Our children. Cent. 87:345–47. (Ja. '14.)

Hibben, John Grier. The type of graduate scholar. Educa. R. 47:1–9. (Ja. '14.)

Hill, Herbert Wynford. The problem of harmonizing aesthetic interests with the commercial and industrial trend of our time. English J. 2:609–12. (D. '13.)

Hill, L. B., Rejall, A. E., and Thorndike, E. L. Practice in the case of typewriting. Pedagog. Sem. 20:516–29. (D. '13.)

Hinkle, E. C. Tests for efficiency in arithmetic. Educa. Bi-mo. 8:123–35. (D. '13.)

Keene, Charles H. The effect of conditions of schoolroom heating and ventilating on schoolroom attendance. School R. 22:20–25. (Ja. '14.)

Lowell, Abbott Lawrence. Measurements of efficiency in college. Educa. 34:217–24. (D. '13.)

McFarland, Raymond. Present facilities for the training of secondary school teachers in New England. Educa. 34:207–12. (D. '13.)

MacLear, Martha. The teacher's need of a community life. Pedagog. Sem. 20:539–41. (D. '13.)

McManis, John T. The locus of studies. Educa. Bi-mo. 8:95–105. (D. '13.)

Mason, Gregory. Educating a democracy. Outl. 105:742–44. (6 D. '13.)

Massal, Joseph A. Sending the convict to school. Tech. World M. 20:698–99. (Ja. '14.)

Mead, Cyrus D. The age of walking and talking in relation to general intelligence. Pedagog. Sem. 20:460–84. (D. '13.)

Mirrors in school. Lit. D. 47:1273. (27 D. '13.)

Morse, Josiah. A comparison of white and colored children measured by the Binet scale of intelligence. Pop. Sci. Mo. 84:75–79. (Ja. '14.)

Mrs. Young and her enemies. Lit. D. 47:1263–64. (27 D. '13.)

Orr, William. Aims and standards for preparation of secondary school teachers in New England. Educa. 34:213–16. (D. '13.)

Passano, L. Magruder. The college as a commercial factory. Educa. R. 46:457–62. (D. '13.)

Program of New England Association of Colleges and Preparatory Schools. Educa. 34:197–200. (D. '13.)

Repplier, Agnes. Popular education. Atlan. 113:1–8. (Ja. '14.)

(A) "school of country life." Lit. D. 47:1160. (13 D. '13.)

Scott, Jonathan F. Education and social conditions. Pedagog. Sem. 20: 530–38. (D. '13.)

Sechrist, Frank K. Psychology of unconventional language. Pedagog. Sem. 20:413–59. (D. '13.)

Spaulding, Frank E. Measurements of efficiency in college. Educa. 34:225–48. (D. '13.)

Strayer, George Drayton. Is scientific accuracy possible in the measurement of the efficiency of instruction? Educa. 34:249–58. (D. '13.)

Strong, Alice C. Three hundred and fifty white and colored children measured by the Binet-Simon measuring scale of intelligence. A comparative study. Pedagog. Sem. 20:485–515. (D. '13.)

Sylvester, R. H. Clinical psychology adversely criticized. Psychol. Clinic 7:182–88. (D. '13.)

Terman, Lewis M. A report of the Buffalo conference on the Binet-Simon tests of intelligence. Pedagog. Sem. 20:549–54. (D. '13.)

Thompson, Oliver S. The minimum essentials of the school curriculum. Educa. Bi-mo. 8:136–43. (D. '13.)

Titchener, E. B. Psychology: science or technology? Pop. Sci. Mo. 84: 39–51. (Ja. '14.)

Webster, Edward Harlan. Preparation in English for business. English J. 2:613–17. (D. '13.)

Welby, Désirée. The child and the nation. Liv. Age 274:707–12. (20 D. '13.)

West, Andrew F. The household of knowledge. Educa. R. 46:433–37. (D. '13.)

Witmer, Lightner. Children with mental defects distinguished from mentally defective children. Psychol. Clinic 7:173–81. (D. '13.)

Wolcott, J. D., ed. Monthly record of current educational publications. U.S. Bur. of Educa. Bull., 1913, No. 53. (D. '13.)